

MASSACHUSETTS PLOUGHMAN

DEVOTED TO AGRICULTURE, THE FARM, THE GARDEN, THE GROUND.

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MASSACHUSETTS PLOUGHMAN

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Correspondence from particular farmers, giving

the results of their experience, is solicited.

Letters should be signed with the writer's real

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AGRICULTURAL.

To make fence posts more durable, it

has been suggested to soak them in a

solution of blue vitriol, one pound to

five gallons of water.

The question is frequently asked:

How many tons in a cord of manure?

Three tons to the cord is the usual esti-

mate, but the actual weight varies con-

siderably.

ONE of the famous "Rothamstead ex-

periments" indicated that the nitrogen of

barnyard manure is only one-half the

value, weight for weight, of that of sul-

phate ammonia.

ALL kinds of farm stock enjoy a

change of food, and both hay and pas-

turage would be better relished and do

more good when the field consists of

several kinds of grass and clover instead

of a single variety.

ALSKER clover is not appreciated as it

should be. Sown with red top it makes

the very best sowing for wet lands. It

will thrive where the soil is quite moist,

and it will even stand flooding without

being killed. It will flourish in loca-

tions which would be death to red

clover.

COMMON soap suds are of considerable

value to plants and should not be

wasted. If the sink drain discharges

directly upon soil land there will be a

vigorous growth of grass and no smell

if the trough is moved frequently. If the

soap suds are poured over plants or

shrubs it will help to keep away in-

sects, but do not pour suds around

trees in winter, as it will probably kill

them.

THE Champion quince five years from

setting, if well cared for, can be ex-

Raising Calves by Hand.

The high price of cattle of all kinds will make the farmer anxious to raise all his calves this year, and the calf like every other animal must have a good start in life if it is expected to make profitable stock; and whether it is intended for beef or the dairy the bone and muscle must be properly developed, and there is no question that the quality as well as quantity of the food fed during the first year of its life is an important factor in building up the frame of any animal.

The whole milk of the mother is the food that nature provides, and if man wants to take something out of it by way of toll it is reasonable to expect him to furnish a substitute. Having had considerable experience in raising calves by hand I will give what I regard as the best ration for the purpose. My experience has been mostly with the home dairy. The best and most available substitute for the butter fat taken out of the milk is to be found in flax seed, but in using either the seed or the meal after the oil has been extracted it is necessary to be very careful until the digestive organs have become accustomed to the change. My method is to feed whole milk for the first week, half skim milk with a little flour porridge the second week. Then take a tablespoon full of flax seed and a quart of water for each calf, boil half an hour, thicken with a little flour, buckwheat flour preferred, add three quarts of skim milk and feed while warm; this makes the best ration I ever found for calves under a month old, but constant watchfulness is necessary to prevent scouring. When they get a little older the flax seed can be made into jelly by pouring boiling water on it, and after it has stood twelve hours, mix with oats and corn ground together, or oil meal can be mixed with the ground feed instead of the jelly, one part of the oil meal to ten of the other two. If a calf is taught to eat oats when a month old, a quart of oats twice a day with two quarts of skim milk for a drink, to be increased as it grows older, will make a slick, trim built calf. Its digestive organs will develop so that it will go through the winter in good shape, and at a year old will be as good as the calf that has run with its mother. On the other hand if you want a runt, put bellied animal feed it all the skim milk you can get it to take all through the summer, and you will have to nurse it all through the first winter, and if it lives to be two years old, it will probably be as large as a respectable yearling, but it will never make a fine beef steer nor a good dairy cow.

Green Co., Wis.

Starting the Potato Crop.

SOILS.

A rich, sandy loam is best for potatoes, soil fairly moist also and with considerable vegetable mold. If there is a tincture of clay in the loam, the flavor of the tubers will be improved, but stiff soils are unsuitable. In general the potato should have the best soil on the farm since the crop will pay better than other crops in such a location.

Corn after sod land frequently precedes potatoes and is regarded as a good rotation, namely: grass, corn, potatoes. Potatoes may sometimes be grown successfully for two years on the same soil but it is better to take fresh field every year in order to avoid scab and rot. Here is another good rotation for those who grow grain. First year sow fall wheat with clover. Second year, harvest the clover and plow under the second growth, and in the spring of the third year plant potatoes. The soil should be plowed deeply and thoroughly. In loose soil the fine roots sometimes go as low as 2 1-2 to 3 feet.

Liberal manuring pays well. Barnyard manure applied directly favors disease and is often too coarse, hence many of the best growers apply barnyard manure to corn or grass; the year before the potatoes are grown. If however, it is applied in the hill the same year it should be well rotted. Chemical fertilizers will pay better on pota-

atoes than on most farm crops, especially on a soil that has already been manured for other crops or on land that has recently been in sod. Nitrate of soda, acid phosphate and sulphate of potash, are favorite chemicals. Ashes increase the yield but are said by many to tend to cause scab. All potato fertilizers should contain a high percent of potash. There are some high grade special manures advertised for this crop that are giving splendid results. Fertilizers may be applied in various ways, but should not come in direct contact with the seed.

VARIETIES.

Among the popular varieties in this section Early Rose and Beauty of Hebron for early varieties and White Star, Rural No. 2 for later.

PLANTING.

Level planting is considered the best practice for largest yields, but for an early crop or on poorly drained land low ridges are better. It is a good plan to make the furrow a little deeper than is needed not filling it level until the weeds begin to start thus killing a good many of them. The best practice seems to favor planting the seed not less than four inches deep. Too shallow planting reduces the yield and too deep planting makes it hard to harvest the crop.

Northern grown seed is to be preferred. It is best to select only potatoes that have not sprouted for planting, since a sprout that has been rubbed off has weakened the potato. A good distance is to plant a foot apart in rows three feet distant. It is better to plant one large piece than several small pieces.

Many farmers still plant small potatoes but the leading growers select medium to large seed and plant half and quarters. If quarters are used one foot by three feet, fifteen bushels are required to the acre.

Notes from Experience.

I am often seized with a desire to use my pen when I see what individual farmers might do to benefit themselves, and what they might do collectively for their mutual benefit. But remembering what human nature is, I leave my pen and ink unused, lest young and ardent farmers would "catch on" to my infirmities by my style and wonder why an old "sojourner" of nearly eighty years should attempt to instruct the tillers of the soil in these enlightened days.

Experience is a schoolmaster that we are all indebted to for a great deal of wisdom. I do not claim the more years the more wisdom. I am but like some who speak in meeting; I get a relief of mind by putting some things on paper, even if a portion of the manuscript goes into the waste basket.

Dr. Franklin left many wise sayings that have done much to better the generations that have followed him. I remember one that especially impressed me when a school boy. "A penny saved is two pence earned." I could not then understand just how that could be, but I took it for granted that it was true because Dr. Franklin said it. I got enough money quite early in life by saving, to go to menageries and get a sight of the elephant and the monkeys. Later, I got enough to pay the subscription to a weekly newspaper. I was but a boy then.

I have found it beneficial to apply this principle of saving to other things beside money. For some years I have applied it to my harnesses, and I am well pleased with the results. In addition to having them well oiled at least once a year I house them handy to where the horses are unharnessed. I have a broad cupboard, eight inches deep by four feet wide, and deep enough up and down to take in the harness when hanging on pegs. My cupboard is large enough to take in two harnesses and is closed every time a harness is put into it. I have an old harness, which is used in the rain when needed. When taken off, it is hung in the cupboard and the door closed. It gradually dries and is in good condition to use next time. My harnesses are so pliable and soft, questions are asked to know the reason. Many a farmer's harnesses are hung on pegs or nails,

where a draft of air strikes them and they get hard and dry before half worn out. They begin to break, and the stitches begin to give way, because of the stiffness of the leather. "One harness saved is as good as two earned," for, treated in this way, one harness will last as long as two treated in the usual way.

This rule should be applied more thoroughly than it is, for the best interest of many farmers.

The rainy season is on, and farmers are idle. No planting has been done. Potatoes put to sprouting for an early crop, still stand in the bags in a cool place to prevent more growth. Everything is full and running over. The brooks are all "jolly" with running water. The rivers are "mad" and go rushing on as if bound for the "front" before the call is out for volunteers. Every nook and corner and hollow has its share of water and to spare. Wells are full and disterns, too, if they don't leak. This morning, April 26, a few flakes of snow have come sailing through the air, indicating that the elements are not ready to indulge the farmer in seed planting.

It is a good time to mend up the farm tools or invent new ones that will help to "tickle nature" more effectually or to help us eradicate the pests of the farm. I find it a pleasure to conjure up something so that work may be more easily and quickly done.

I have just been reading the People's Farm and Stock Encyclopedia by Waldo F. Brown. It is full of meat and young farmers cannot go amiss in getting it.

Z. BERR.

No. Weare, N. H.

P. S.—The people here think Congress made a big mistake in pushing our President to go into war.

Grain Mixtures to be Fed Daily With Coarse Feed.

Prof. Lindsey in Bulletin No. 53 of the Hatch Experiment Station recommends the following grain mixtures to be fed with coarse feed.

1. One hundred pounds corn or hominy meal. One hundred pounds bran, mixed or chop feed. Seventy-five pounds cotton, gluten or linseed meal. Mix and feed eight to nine quarts daily.

2. Two hundred pounds chop or cerealline feed. Seventy-five pounds cotton, gluten or linseed meal. Mix and feed seven to eight quarts daily.

3. One hundred pounds oat feed. One hundred pounds Buffalo or Gluten feed. Mix and feed eight quarts daily.

4. H. O. dairy feed. Feed six to eight quarts daily.

5. Gluten feeds. Feed five to six quarts daily.

6. One hundred pounds fine mid-glens. One hundred pounds brewers' grains or malt sprouts. Mix and feed seven to eight quarts daily.

7. Fifty pounds linseed meal. Fifty pounds cottonseed meal. One hundred pounds oat feed or chop feed. Mix and feed seven to eight quarts daily.

8. One hundred pounds corn meal. Fifty pounds bran. Fifty pounds cottonseed meal. Mix and feed seven quarts daily.

Soils for Fruits.

Apples will do well on almost any corn soil. Pears like a medium clay loam, quinces bear best and live longest on heavy, not soggy clay. Plums do well on a heavy loam. Gooseberries and strawberries a rich loam. Grapevines should be planted on a sandy loam with a dry sub-soil. Raspberries flourish in a deep, and rather moist soil. All the fruits will of course grow on other kinds of soil, but to get the best and largest product at lowest expense it is best to adapt the soil as closely as possible to the crop.

DWARF pears come into bearing young and are good to set in a garden, but for field culture most growers consider the standard trees more profitable. The same may be said of dwarf apple trees, only more so.

Summering Cattle on Grass.

I don't know of any subject more timely than how cattle of all kinds should be treated while living on grass. The common method with most farmers is to let them all run together—calves that are fed by hand excepted—many or few, large or small, just one pasture and generally too small for the number that must get a good living or be half starved. Then close grazing and often long dry spells and a good number of cattle following each other day after day, reaching through fences and in the hot weather the field looking so bare that the grass roots are often killed out entirely. This is no overdrawn picture. Now how can a cow give a good yield of milk or young cattle take on much growth or flesh under such conditions, unless they get a satisfactory feed and in reasonable time they cannot spare the time needed for rest and to chew their cud. Every farmer should have two or more pastures. Milch cows do better alone, but if that cannot be had, there should be at least two pastures so that one of them could be rested a while and if suitable weather, two or three weeks will start the grass so that when you turn them on it again just watch the difference in the growth and yield and see the grass start up in the one vacated. This is a better way than if the number of acres were all in one lot. I hope those interested will try it.

Where cattle are compelled to eat off the blades of grass scarcely an inch high and probably destroy others just peeping out, ten days, if left to grow, would furnish twenty times as much feed and to injury occur to the roots. People tell of leaks and losses on the farm, but too close grazing is the biggest one I know of. Then there is a big talk about calves dying from scours, etc., but it is generally those that feed their cows such a big lot of stimulating nostrums of different kinds that makes the milk rank poison to their offspring. Calves from such pampered mothers are as good as sick at birth. Cows should be fed almost entirely on what you can raise on your own farm and then like common farmers, losses would disappear. It is risky to buy cows of some men.

If calves get the scours, we stir flour in their warm milk and an egg too, until it is checked. We teach them to eat oats and ground feed and keep hay before them all the time until turned out to grass. When cows scour badly on tame hay and mill feed, make a real hard boiled dumpling of flour and water only, boil it until hard and when cool cut into pieces and feed it to them, it will quickly stop the scours. This receipt is worth dollars if it works for others as it has for us. I may tell you what pastures are like in England and how they keep them good all the time. They have a more moist climate than we have, but we could greatly improve ours by following their methods.

Wm. OXLEY.

Hancock Co., Iowa.

A great variety of oat refuse is now finding its way into our markets. It has been found to contain from thirty-five to nearly sixty per cent. of hulls. In some cases it is mixed with corn and with barley; it is then quite difficult to ascertain the percentage of hulls the mixture contains. Oat refuse is low in protein, and high in carbohydrates, being of the same nature as corn meal. Material of this kind unquestionably has considerable feeding value. Those articles having a special brand, and containing the manufacturer's name, are to be preferred.—Prof. Lindsey.

Adulterated Cottonseed Meal.

Farmers are especially cautioned against purchasing cottonseed meal without a guarantee. The experiment station has recently found adulterated meal along the line of the Fitchburg Railroad at Gardner, Baldwinville, Fitchburg and Leominster. Also at South Framingham and Franklin. This article contains scarcely more than one-half the amount of nitrogen or protein found in a prime meal, and is therefore only one-half as valuable.

JOSEPH B. LINDSEY,
Hatch Experiment Station,
Amherst, Mass.

Pear Scab.

During the past two years a number of inquiries have been received concerning pear scab, and among the smaller orchardists or others with a small number of trees, equally as many inquiries have related to the well known pear blight, says Bulletin 145 of the Cornell Station. Consequently, it has seemed well to incorporate in this bulletin such brief accounts of these two diseases as will give the information desired.

The injurious effects of pear scab are well understood by many orchardists; and by some the disease is combated faithfully and successfully, but to others it is an inevitable attendant of pear culture. During the past summer I was surprised to find how often pear scab is confused with certain insect punctures and other minor injuries. I presume, however, that no one who ever grew so susceptible a variety as the Flemish Beauty could long remain ignorant of the scab.

With many varieties of pear, cracking may accompany the scab as well as the leaf blight, or apparently even certain irritating external agencies may produce the cracking, provided the respective agencies affect the pear during the growing period.

On the fruit the pear scab produces at first merely brownish or olivaceous markings. These discolorations are due, in part, to a short surface growth of the fungus, and to the deadening of the epidermis of the pear.

The leaves are often severely affected, the spots being usually more abundant in the neighborhood of the midrib on the under surface. During the past year Professor L. H. Bailey received from Michigan some leaves so badly affected that the fungus growth covered the greater portion of both surfaces, and the leaf was considerably curled therefrom.

Pear scab has been known botanically since 1832, when it was found in Belgium; but it is only within the past twenty years that it has had a place in economic literature. Hereafter, at least until unsuceptible and otherwise satisfactory varieties are introduced, to the successful orchardist a knowledge of scab is as essential as a knowledge of pruning.

SPECIAL CHARACTERS OF THE SCAB.

(a.) Microscopic appearance.—The olivaceous growth on the fruit, leaves and twigs is largely made up of short erect threads somewhat uneven at their tips. These threads produce the spores or reproductive bodies. Over the entire surface of the pear, as of plants in general, there is a definite outer layer of cells which we call the epidermis. The outer wall of this epidermal layer usually becomes thickened into a very tough resistant cuticle. Inside of the epidermal layer of the pear we find the pulpy cells and the gritty cells of the fruit without special regularity. The mat-like mass of fungus threads is developed largely just beneath the epidermis, and they never extend very far into the pulp of the pear. They often penetrate the cells of the epidermis, deriving their nutriment entirely from their outer layers. The erect threads arise from this mass of threads, break the cuticle, and produce spores. Later, the epidermis is ruptured, and then we find that a definite corky layer has been formed by the cells of the fruit below the diseased area.

The process of germination is as follows: After falling upon the leaf or the fruit, with suitable conditions, the spore absorbs water, and pushes out a little thread, or germ tube. This germ tube has the power of passing in through the cuticle and epidermis, where it branches greatly and develops the thread-like mass of fungus hyphae, and soon again the scab spot is seen on the surface.

(b.) How the fungus passes the winter.—It has been seen that pear scab often attacks the twigs of the first year. The fungus threads are extremely resistant, and, buried in the bark of the twigs, it is generally admitted that the disease may thus pass the winter, producing the following spring a crop of spores to reinfect the young branches and leaves, as well as the fruit cluster. It is also believed that the fungus may pass the

winter in the diseased fruit and leaves. In Germany, a winter stage of the fungus has been found belonging to the genus *Venturia*.

In artificial cultures on bean stems and other nutrient media, I have grown for some time the fungi of apple and pear scab. These cultures have yet given no indication of this other fruiting stage, or winter form of fungus.

(c.) Does Pear Scab differ from Apple Scab?—It is well known that pear scab differs from apple scab in some particulars; but some have claimed that these differences are so small as not to denote that fungi are distinct. However, it is of considerable practical importance to know that some recent work tends to show that these fungi are distinct species; hence, if this is true, pear scab cannot spread to the apple, and there cause apple scab, or vice versa.

VARIETIES AFFECTED.

Scab affects to a greater or less extent a number of the varieties commonly grown in New York. The data upon this subject are limited, but it is generally reported that Le Conte, Kieffer, and Bartlett are less attacked than such varieties as Anjou, Lawrence, Duchess, Clairgeau, Sheldon, Seckel, Summer Doyenne, Flemish Beauty, and Jones. On Seckel, Flemish Beauty, and Summer Doyenne I have found it very abundant during the past two years. In a list of about twenty-four varieties given by Beach in bulletin 84 of the State N. Y. Exp. Sta. we find none other than the three mentioned included among those only slightly attacked.

REMEDIES.

Since we may assume that this fungus lies over winter in the young branches or diseased fruit, it is quite evident that there is all the more reason for beginning any work of prevention at the earliest time expedient. Fairchild found that before the flower buds open the young scab spots may appear upon them. It is very important to prevent the early establishment of the disease; for once having secured a foothold, spores are rapidly produced and dissemination is very rapid during seasons favorable for the disease.

For the prevention of this fungus, many experiments have been made at various stations with the different fungicides. During the past few years special attention has been given to pear scab at the Geneva Station in New York. The final results are not at all discordant with those of other stations, and recommendations are made somewhat accordingly. Spray three times with Bordeaux mixture of the fifty-gallon strength. The first spraying should be made before blossoming, but after the fruit buds burst; the second immediately after the petals; and the third about two weeks after the second.

Transplanting Tobacco.

Any time after the first of May or when the weather becomes settled tobacco plants should be set out. By this time the leaves should be about 2 1-2 inches wide. Before transplanting soak the plant bed so that the plants can be moved without injury to the roots. Then they can be drawn out one at a time. The field to which they are to be transferred should be put in such condition that comparatively little intervention will be required. Lay off the land in rows 3 1-4 feet apart, making check rows. It is usual to ridge up little hills with the hoe at the intersections of the rows. Make a hole in the hill with the finger and insert the roots of the plants, pressing the earth firmly about them. If any of the plants are killed out by cut worms replace them as soon as possible in order to secure an even stand. Stir the soil often to keep it moist, loose and mellow.


A good remedy for garget is a teaspoonful of saltpetre given the cow in a bran wash, once a day, for three or four days.

A good garden can be made to yield more than any five acres of the farm which is put in staple crops. Even if you do not fancy the labor of attending to the garden, the question of economy and profit should be sufficient argument to induce you to try it.—Farmers' Guide.

CRANBERRY BOG FOR SALE.

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POULTRY.

Nests to Prevent Eating.

To prevent egg eating, keep the nests in the dark. A good arrangement is to have the nests under the droppings board, provided the board is cleaned every day. Have the nests facing the partition and boxes for the hens to enter.

When the nests are dark the hens are less likely to fight over nests thus breaking the eggs. The back side of the nests should be fixed so that they can be raised and the eggs taken out when wanted. Do not have the nests so shallow that the eggs will be knocked out and broken. Collect the eggs frequently. If eggs are not broken in the nest the hens are not likely to begin the habit.

Cheap and Bulky Food.

The question how to supply the best food the most cheaply is one that each individual must solve largely for himself.

In a general way, however, it may be said that during the winter and early spring months, mangel-wurzels, if properly kept, may be fed to good advantage. The fowls relish them, and they are easily prepared. As it is not difficult to grow ten or twenty tons of these roots per acre, their cost is not excessive.

In feeding these beets to flocks of hens a very good practice is to simply split the root lengthwise with a large knife. The fowls will then be able to pick out all the crisp, fresh food from the exposed surface. These large pieces have the advantage over smaller pieces in this respect, the smaller pieces, when fed from troughs or dishes, are thrown into the litter and soiled more or less before being consumed by the fowls, and in fact many pieces will become so dirty that they will not, nor should they, be eaten. Large pieces cannot be thrown about, hence will remain clean and fresh until wholly consumed.

Clover during the early spring is probably one of the cheapest and best foods. It is readily eaten when cut fine in a fodder cutter, and furnishes a considerable amount of nitrogen. If clover is frequently mowed, fresh food of this kind may be obtained nearly all summer, particularly if the season is a wet one. Alfalfa, will also furnish an abundance of green food. It must, however be cut frequently.

A good quality of clover hay cut fine and steamed makes an excellent food for laying hens if mixed with the soft food.

Cabbages can be grown cheaply in many localities and make excellent green food so long as they can be kept fresh and crisp. Kale and beet leaves are equally as good and readily eaten. Sweet apples are also suitable, and in fact, almost any crisp, fresh, green food can be fed with profit. The green food in many instances, may be cut fine and fed with the soft food but as a rule, it is better to feed separately during the middle of the day, in such quantities that the fowls have about all they can eat at one time. If the above directions on feeding are practically observed, there will certainly be no complaint about the egg basket getting empty.

Fattening Chickens.

A well fattened chicken, when properly cooked, is a delicious morsel. Abroad the art of fattening is well understood; in this country too little attention is paid to the subject. If the chickens have been well fed, and have run at large during the whole time, nothing more is deemed essential. I think that poultrymen make a grave mistake by not paying more attention to this art. When the appliances absolutely necessary can be had for very little expense, and when the cost of fattening need not be very much, there is little excuse for not employing the means for so doing.

The return to the producer for fattening his stock comes in two forms—first, by an increase in the weight of the chickens, and second, by an increase in the price per pound. Suppose, for example, the poultryman has two hundred chickens to sell which, unfattened, would average four pounds each and bring 15 cents per pound—that is, he would receive for 800 pound, at 15 cents per pound, \$120. Now, suppose by fattening them he makes them weigh but one pound more each—a small gain—and he gets but two cents per pound increase in price (a sum frequently greatly exceeded); his chickens will bring him, 1000 pounds at 17 cents, \$170, an advance of \$50—a very convenient little sum. Should he add two pounds per chicken, and get five cents additional per pound—by no means an extravagant hypothesis—he will raise his \$120 to \$240, exactly double what he would have received in the unfattened condition. That it does pay to fatten the chickens follows very naturally from the fact, without the illustrations we have used, that in England there are men who make it their business to pur-

chase unfattened chickens, fatten and then sell them.

Without adopting the more or less elaborate appliances used abroad, a great gain can be made by preparing a number of coops capable of holding, without undue crowding, from ten to twenty birds. The coops should be so constructed as to be quite dark, except in front, and after feeding, the fronts should be closed by hanging burlaps over them. I have seen used mere boxes with laths nailed across the front. In these coops chickens of the same sex and as nearly of an age and size as possible should be confined. Opposite sexes should not be confined together, for they will be more uneasy and fatten less rapidly, if they are. They should be of about the same age and size to prevent the overbearing conduct that large chickens show toward smaller ones.

The coops should be cleaned out daily to prevent the unpleasant odor that arises from droppings and which is inimical to health, as well as to prevent vermin from multiplying. The chickens should be carefully treated for vermin before they are put into the coops, by dusting them thoroughly with insect powder of some kind.

The fattening should be done as rapidly as possible. Too long close confinement is apt to injure the health of the chickens, and as soon as health begins to fail perceptibly they will lose flesh. The more rapid the fattening, too, the tender will be the chickens. Every farmer knows that an old cow, if rapidly fattened, makes good, tender beef, but if the fattening process is slow, the quality of the meat deteriorates. The soft, swollen muscles of a rapidly fattening chicken make much better poultry than when the flesh is, so to speak, worked on and the muscles kept hard by vigorous exercise.

In this country, as the popular taste demands as yellow a chicken as can be had, the food should be chosen accordingly. For grain, I think nothing is better than sound, yellow corn, either whole, cracked or ground. For rapid fattening I prefer it ground and made into dough by being slightly moistened with milk. If to the corn meal is added about 10 to 15 per cent, of ground beet scraps, the fattening will proceed more rapidly. For drink, nothing is better than sweet milk, except sweet milk sweetened with sugar, about a heaping tablespoonful to each quart of milk. If the droppings show a tendency toward diarrhea, the milk should be boiled.

I have insisted on the rapidity in operation. It should be well done in three weeks, and, in many cases even less time is necessary. I have added two pounds to the weight of a Plymouth Rock cockerel in two weeks without keeping him as closely confined as I deem best for fattening chickens. This bird was alone in a coop about eight feet long by two and a half feet wide, had abundance of light and took considerable exercise. Quite a number of chickens for fattening could be confined in a coop of that size.

A lady who reared chickens for us several seasons used to confine the cull birds in small coops for fattening. She gave them water to drink and fed them wholly on yellow corn; and the results she obtained were extremely satisfactory, for her chickens were fat, yellow and commanded the best market prices. And yet she took but little more care of these fattening chickens than most poultrymen take of their growing flocks. They were fed and watered regularly and their coops cleaned occasionally, that was all. Her success in fattening chickens led me to take more interest in the operation and to employ methods almost as simple as hers, that gave us even better results, because quicker than she obtained.—Country Gentleman.

Poultry Notes.

Economy of labor is not given sufficient attention in most large poultry plants. But some of the most complete establishments already have automatic arrangements for feeding the hens, making them exercise and cleaning the pens.

On farms where there is grain to be sifted the screenings make a cheap and satisfactory food for young chickens. Even the weed seeds have some feeding value and give variety. But such food should not be given until the chicks are four or five weeks old.

The great advantage of a gravelly location for a hen yard is that no grit need be supplied in summer. If the ground is dug up occasionally the hens will find all they need. Another advantage of gravelly locations is that they are always dry and healthy. Apple trees will thrive well on such soil and orchards so located makes the best of poultry runs.

How many eggs will a hen lay, is a question often asked. Only a general answer can be given. An average hen of the Leghorn or Hamburg breeds, under good management, may be expected to lay about 200 eggs per year. Minor breeds under the same conditions about 175 eggs. Plymouth Rocks and Wyandottes

about 150. Brahmas and Cochins about 130. Pekin ducks lay about 130 eggs. Geese 20 to 40.

Planting and Care of Shade Trees and Wind-Breaks.

Farmers generally do not take advantage of the very easy and sure way of adding value to their real estate by planting our native trees in neat lines along road-sides and lanes, around buildings and yards, in clumps on waste or unsightly places, or bluffs that are too rough for cultivation. These places planted with black walnut I believe will be as good an investment as the same area of apple orchard on suitable soil, although dividends will not be realized from the walnut timber as early as from the apples. American black walnut can be grown better by planting the nuts directly where the trees are wanted, as the walnut is a little difficult to transplant owing to the large tap-root and the absence of fibrous roots. This condition applies to most of the nut-bearing trees. The walnut begins to bear at Pictou when planted from the nursery in about eight to ten years, and although the nuts are quite strong flavored they are relished by some people. For planting, the nuts should be gathered when ripe and not allowed to dry. They can be kept out doors by packing in a box of sand, or may be planted directly where desired. Cover the nuts three inches deep, mulch lightly; keep down grass and weeds, and use plenty of manure. When once started the trees increase in diameter about half an inch every year. American sweet chestnut is grown for commercial purposes mostly in its natural state, but when planted in the clearance makes a good shade tree. The leaves are nicely serrated and glossy, giving the tree a beautiful appearance.

Hickory nuts have become quite popular in the markets, and in selecting for planting, only use from trees bearing good-sized plump-nuts. These and the chestnut require the same treatment as mentioned for the walnut. Basswood, when planted in the clearance, forms a pretty compact shaped head, and besides being valuable as a timber, shade and ornamental tree, it is a source of the best crop of honey produced by any plant grown in Canada, and as our forests are being destroyed it would be wise to have the basswood planted extensively for the encouragement of apiculture, for trees are valuable to fruit-growers and farmers as they insure fertilization of flowers. Basswood grows readily from seeds.

Sugar, or hard maple, our national emblem, should be planted broadcast everywhere where there is room for a tree, as it may be had in most localities for digging. It grows a symmetrical-shaped head when properly planted and pruned. The soft maple grows very rapidly and will succeed on a greater variety of soils than the hard maple. Trees in our yard planted eight years are six inches in diameter and give plenty of shade for the hammock. Maples can be dug best with a strong, sharp spade, cutting a circle around the tree 25 to 30 inches in diameter and lifting out the plant with soil and leaves adhere to it. Cut off all branches and saw off the top not more than seven feet from the roots. The trees that have given us the best growth were one and a half to two inches in diameter a foot from the ground when planted. When growth starts rub off all buds except a few at the top of the bare trunk to form a head.

Norway spruce is the best evergreen for practical use in Ontario, either as a wind-break or as an ornamental tree. It makes a dense upright growth of uniform shape and is very attractive planted alone or alternately with deciduous varieties. Keep trees well mulched which comes nearest to their natural condition. The writer does not favor planting trees any thicker than they are to remain, except where straight long trunks are required for timber, for it requires more courage than most men have to thin out a row of trees when once they are established. The farmers at the Institute meeting at Glen Allen, estimated a farm having 100 shade trees, well arranged would sell for \$500 more than a similar farm along side, other improvements being the same. Where young trees can be found not more than a mile from the place where needed, the 100 trees can be selected, dug, trimmed and planted for \$5, if the work had to be hired, but most farmers are strong-handed enough to plant 100 trees every spring.

Possible Injuries.—(1) Where planted too thickly so as to form a windstop, which is not desirable. A free circulation of air might be prevented and thus encourage insects and fungus growth. (2) Encroachment—adjacent crops will certainly be injured, but a good wind-

break of line or ornamental trees are well worth the land they occupy.

Decided Advantages.—Evaporation is lessened and the moisture in the soil assimilated by growing crops instead of being hurried in the air by heavy winds. For illustration of this point, refer to Prof. Panton's experiment in the Report of the Superintendent of Farmers' Institutes for 1895-6, page 60, which shows that wind hastens the moisture out of the soil. (2) Protection of bloom from cold, rough weather will ensure a good crop which might from exposure result in a light yield. (3) Snow and leaves are retained and help to retard fruit bloom in localities subject to late spring frosts. (4) Less injury is sustained from wind when trees are loaded with ice which ruins so many fruit trees; also the loss from windfalls is reduced. (5) Erection growth in fruit trees is difficult without protection from prevailing winds. (6) Encouragement of insectivorous birds. This advantage alone is worth the land and care required to have a good wind-break where the birds will build their nests and bear their young largely on insects that destroy our crops. These birds and their nests should be protected by legislation, including the extermination of the English sparrows which are driving useful and friendly birds out of the country by destroying their eggs taking possession of the nests for their own use. (7) A farm beautified by shade trees is enjoyed both by the traveling public and by the farmers themselves.—Farming.

Onion Plants Damping Off.

The old troublesome question, is asked, what causes onion plants in a hot-bed to damp off? We have had much trouble with this fungus disease in our hot-bed operations at various times, and, in fact, have not yet learned enough of this old enemy to get entirely rid of it. It is much easier, however, to keep our plants free from attacks in the greenhouse than in hot-beds, showing that the want of ventilation or of other natural and proper conditions is probably what makes the plants so subject to the disease.

The point of attack is always at the stem just below or near the surface of the ground. As proper safeguards I consider the use of new soil that is supposedly free from infection.

I now make my onion plant beds as follows (and since doing that have not had a case of "damping off" viz: The bench is filled up to within an inch of the required depth with the richest of plant or bench soil, consisting of about one-third old stable manure, one-third sand, and one-third oak or rotted sods, rich garden soil, etc. Over this I sprinkle a thin layer of sifted coal ashes, just enough to bed the onion seeds nicely in it without having more than an eighth or at most a quarter inch of this material below this seed.

The black seed shows off so plainly on the white surface of the ashes that it is an easy matter to sow just about the right quantity of seed and sow it very evenly besides. The seed is covered by sitting evenly over the whole surface of the bed, say to a depth of a half or three-quarter inch, some clean sand or a mixture of clean sand and sifted coal ashes.

We always take good care to have the soil in the bottom of the bench quite moist before the seed is sown so that there will be but little necessity of heavy watering for some time after. The seed usually comes up very promptly.

The chief object of the whole soil arrangement is to have the stems of the plants, where liable to the attacks of the damping off fungus, grow in a soil that is free from infection, and I believe that none can be expected to be safer in this respect than clean sand fresh from the river side, and coal ashes.—T. Greiner in the Practical Farmer.

An Up-to-date Fruit Grower.

The up-to-date fruit grower is a wide-awake man or woman, and does not follow in the rut made by the preceding generation of fruit growers. He reads everything that he can get pertaining to his line of work, and is not slow to "catch on" to new ideas.

Of course he aims to enrich his ground to the highest degree of fertility, and fits it with the object in view of getting every particle of soil into that condition which will make it an acceptable feeding ground for the large number of roots that every plant must have in order that it may bring to maturity its quota of 300 bushels to the acre yield. He sets nothing but the strongest and most thrifty plants in the best possible manner, and cultivates them after the most approved method. He gives his plants protection during the freezing and thawing of the winter months, and mulches his strawberries during the picking season, to keep the fruit from becoming "gritty."

He gives his raspberries and blackberries a winter pruning, and furnishes them with a mulch of fine dirt, making the soil "sweet" with frequent cultivations.

When a new variety, that is extra large, very beautiful, or of unusually

fine quality, enters a market it creates a sensation, hence the up-to-date fruit grower tests the new varieties as they come out, so that when a really valuable variety is introduced he has it in advance of his competitors, thus attracting trade to himself. He has no fear of a "glut" in the market because he uses full quart baskets, and does not put inferior fruit in the bottom, finishing them off with a few berries; but puts the best berries in the bottom, which agreeably surprises his customers.

He takes pride in his personal appearance and his customers know him as that pleasant looking man who brings us such nice berries, and the little folks along his route, with whom he has made friends, herald his appearance with "here comes the berry man."

The up-to-date fruit grower often leads those in his vicinity, though not necessarily every other person following his profession; for this is a large country and many smart, wide-awake men are engaged in fruit growing; but he may, and does, keep up with the procession, even though he has to hang on to the "big" fellows' coat tails.—Michigan Farmer.

The Advantages of Cow Peas.

Dr. Stubbs, of Louisiana station, in ming up the advantages of the cow gives these points:

It is a nitrogen gatherer.

It shades the soil in summer, keeping it in condition most suitable to rapid nitrification, and leaves the soil friable and loose, in the best condition for a future crop.

It has a large root development, and hence pumps up from great depths and large areas the water, and with it the mineral matter needed by the plant.

Its adaptability to all kinds of soils, stiffest clays to most porous sands, fertile alluvial bottoms to barren uplands.

It stands the heat and sunshine of Southern summers.

Its rapid growth enables the farmer in the South to grow two crops a year on the same soil.

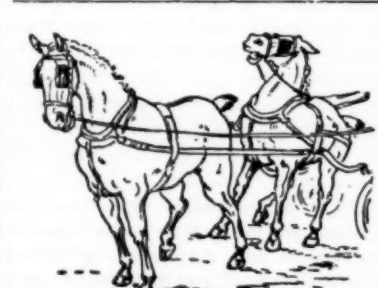
If sown thickly, by its rapid growth and shade, effectually smother all weeds, and thus serve as a cleansing crop.

It is the best preparatory crop known to the Southern farmer, every kind of crops grow well after it.

On the alluvial lands of the Mississippi bottoms it serves to pump off excessive water, evaporating it through its great foliage, thus keeping the soil in a condition for most rapid nitrification during the entire growing season.

It furnishes a most excellent food in large quantities for both man and animal. With all these advantages, it is no wonder that it is called the "clover of the South," and were it used regularly, as one of the crops in a regular but short system of rotation, the soils of this section would soon rival in fertility their primitive condition.

Buy fertilizers in as condensed a form as possible; it does not pay to buy them of low grade, for they contain less of the desired elements in proportion to their cost than do the higher grades, and the cost of freight and handling is all out of proportion to their value.—Farmer's Guide.



A horse in the lead pulls in vain when the wheel horse lays back in the breeching. A man's body is a good deal like a team of horses, and must work harmoniously. The head may want to work, and strive ever so hard to work, but if the body is balky and sick the head will make no progress. The man who is out of condition physically may as well give up trying to work mentally. He will not be able to do good work, or satisfactory work, and in the endeavor to do so will only do himself further harm. The reason that men have nervous exhaustion and prostration is that they try to work the brain when the body is balky. The right thing for a man to do when he finds he is out of sorts physically is to give the mind a little rest, and promptly resort to the right remedy for his physical ailments. Dr. Pierce's Golden Medical Discovery is the best of all medicines for a balky body. When the head aches, the appetite is poor, the sleep is restless, the nerves are shaky and both body and brain suffer from dullness and lassitude, it is time to resort to this great remedy. It restores the appetite, corrects all disorders of the digestion, makes assimilation perfect, invigorates the liver and purifies and nourishes the blood. It is the great blood-maker and flesh-builder. It is the best of nerve tonics and restoratives. It makes both body and brain alert and active. Medicine dealers have nothing "just as good."

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MASSACHUSETTS PLOUGHMAN

BOSTON, MAY 7, 1898.

Persons desiring a change in the address of their paper must state where the paper has been sent as well as the new direction.

GET a good start in May and the other eleven months will pay.

BETTER try to learn something new every day. No danger of ever knowing too much.

FARMER SLACK has wasted more time dreaming the job of mending his roof than it would take to do the work.

THE whole community are the farmer's hired help and when he stops business not one of them can long draw pay.

THE girls of the farm ought to be the healthiest of them all. A flower garden will do them more good than an apothecary shop.

THE ruddy complexion of the farmer will be in fashion for the next six months. Better for the health of the city people, if it were in fashion the year round.

NOTHING will take the spring out of mind and body like overwork. It never pays for the man who does it, though it may pay for the man who hires him.

JUDGING from the rate at which farm products have been going up in price lately, 1898 will be a prosperous season for the farmers.

THE various bills for internal improvements are receiving scant attention in Congress and the various state legislatures. After voting millions for war expenses, the public purse does not open easily for expense which can be put off another year.

MANY a good farm hand comes back to the farm in spring well nigh spoiled by his winter in the city where he has spent his summer's savings, and become demoralized by loafing and irregular living. The only really satisfactory way is to manage to keep a good man the year around.

THE spring is doubtless a week or two earlier than the average and would have been earlier yet if it had not been for the recently prolonged cold spell. On account of the excess of rain or stormy weather during April, farm work has been delayed, and although a good deal of ploughing has been done, but a small proportion of crops have been put into the ground.

THE taxation committee in the Massachusetts legislature has made a complete failure of its investigations. The special commission has been considering the various projects offered for improving and simplifying the tax system of the state and the cost of the commission has been considerable. It was hoped that definite results might be secured but the legislative committee has failed to recommend a single measure advanced by this committee. The difficulty seems to be that the commission wanted to exempt personal property and throw the tax on real estate, a measure which no legislature with any regard for public opinion would dare to adopt. Having no good substitute measure ready, it appears that nothing will be done this session. It is an other case of big cost and trifling results. Such outcomes strengthen the popular prejudice against a horde of commissions with which the state is over-run.

THE wide tire crusade is making progress, having attained serious attention in the Massachusetts legislature this season. The proposed measure is exciting a good deal of debate. The lawmakers from the country generally favor the bill, while those from the large cities oppose it. A Boston senator said that wide tires would cost teamsters of that city one million and the wide tires would interfere with the use of the teams after heavy snow storms. Some country legislators consider the measure practical and the expense is placed from \$7 to \$15 per vehicle. It was said that wide tires would save from seventeen to fifty per cent of the power of the team on average fields and twenty-five per cent on the highway. The tires would act as rollers and improve instead of injuring the roads. The bill gives until 1901 in which the proposed changes in tires must be made. This dating ahead is a wise provision because as yet the farmers themselves do not seem very anxious for the change, and the delay of several years will give them a chance to learn the merits of the plan. If wide tires are going to save power and lessen the expense of road repairs to a certain extent the farmers will want them, but as yet they seem hardly convinced that the expense involved will be worth while. If the law is enacted too far in advance of public opinion, it will be nothing but a dead letter.

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Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75c. per bottle. Sold by all Druggists.

CURRENT TOPICS.

"A good man gone" is the thought of all as they read the announcement of the death of Hon. James F. C. Hyde, for more than fifty years a leading real estate and insurance man of Boston, foremost in every good work, and an honest and public spirited man. His business sagacity and integrity caused him to be much sought for as director of various business enterprises, and he was the oldest but one of the directors of the John Hancock Life Insurance Co. He was a director of the Quincy Fire Insurance Company; of the First National Bank, Boston; of the Newton National Bank; president and director of the Newton Savings Bank, besides being connected with many other institutions. His native city of Newton chose him as its first mayor, and he represented it in the legislature when he was but thirty-one years old. He was well known in the agricultural world. Mr. Hyde's father was a farmer and nurseryman, being one of the first in the state to engage in the latter business and brought up his children on the farm. For years he was agricultural editor of the Congressionalist and wrote considerably for other papers.

For years he served on the State Board of Agriculture, being appointed by the governor, or as one of the delegates at large and serving with Colonel M. P. Wilder and Professor Agassiz. He was president of the Massachusetts Horticultural Society for four years, and was instrumental in organizing the Newton Horticultural Society, serving as president two years. Throughout his entire life he was greatly interested in horticulture, agriculture, and floriculture. The claim is made that he cultivated nearly one thousand different plants and trees about the old homestead where he was born, and that his collection of wild flowers was as extensive as can be found in a large botanical garden.

A defalcation causing great surprise has come to light in Northampton, where it has been discovered that Lewis Warner, president of the Hampshire National Bank and treasurer of the Hampshire County Savings Bank, has defrauded those institutions to the amount of some three hundred thousand dollars. Mr. Warner had the confidence and trust of the whole community and had held many positions of honor in that section of the state, being quite prominent in politics. The fact that the two banks had been carried on under the same management made it easy to cover the deficiencies by the exchange of the two banks' securities when either one was being examined. A simultaneous examination brought the wrong to light. This event illustrates the danger of such close connection between two banking institutions, a fact which has been previously recognized, and an attempt was made in this state recently to secure legislation which should guard against this evil, but it failed. Mr. Warner is a fugitive from justice, and his present whereabouts are unknown.

There has been considerable interest aroused as to the action of the board of police commissioners in Boston in granting licenses about the new South Union station. In the past, the various railroad stations of the city have been rallying points around which have gathered the liquor saloons, and a strong effort has been made to keep the neighborhood of the new station free from such influences. Governor Wolcott personally wrote in regard to the matter to the board, President Clark of the N. Y., N. H. & H. R. R. also expressed himself opposed to the granting of licenses in the vicinity of the station and many other leading citizens have expressed themselves vigorously on the subject, thus voicing the best sentiment of the community. It is now announced that these protests are to be heeded and this neighborhood is to be kept free from liquor saloons.

There is much uncertainty in regard to the plans and movements of the American squadrons and the army which has been gathered together on the Atlantic seaboard, and necessarily so, for the disclosure of the plans would increase the chances of defeat and disaster. The policy of the government, is, however, to force the war to a quick conclusion, for the sake of both parties concerned, as well as to carry relief to the Cubans. Two engagements have taken place at the date of this writing, one at Matanzas, Cuba, which might be called an experimental one, and the other at Manila, the chief city of the Philippines. Three vessels of Admiral Sampson's fleet on Wednesday of last week bombarded the batteries in Matanzas harbor, silencing their guns and driving away the garrisons and the men employed in working on the new defenses. Though the batteries fired between eighty or ninety shots at the American vessels, at comparatively short range, not one of them was hit, owing to the poor aim of the Spanish gunners. About twenty minutes sufficed for the wrecking of the Spanish batteries by the big guns of our vessels, and the Spanish loss was probably considerable. There were probably two reasons that influenced Admiral Sampson in choosing Matanzas for the point of attack: First, the moral effect it would have on both the Spaniards and the Cubans; and second, because by ruining its defenses he would make its occupation as a base of operations against Havana the easier.

Matanzas is a city of about thirty-six thousand inhabitants has a fine harbor, and is connected with Havana by two railroad lines, from which it is but fifty-two miles distant. Commercially, it ranks next to Havana among Cuban ports. Its fine bay, sheltered from all but northeast winds, is capable of affording anchorage for hundreds of vessels. These advantages

render Matanzas an admirable base for operations against the capital of Cuba, and while the plans have not been made public, it may be that this port is to be made a base of operations in an active campaign on the island, and this preliminary bombardment may have been for the purpose of finding out the real strength of the fortifications.

But the keenest interest the past week has centered about the movements of the American squadron in the Pacific, commanded by Commodore Dewey. At the time of the declaration of war, the squadron lay in the English port of Hong Kong but when England declared neutrality, it was obliged to leave port and was thus deprived of all coal supplies. In order to establish a base of supplies for itself and also to cripple the Spanish navy in Pacific waters, an attack must be made on Manila, the chief city of the Philippine Islands. A Spanish fleet was stationed in Manila harbor, under a brave commander, but its strength was much less than that of the Americans, the latter including the Olympia, which has long held the world's record for speed for cruisers of her class. When the superior strength of the Americans was learned by the Spanish commander, he wisely held his fleet in the harbor of Manila, where the forts and the squadron could together form a strong combination. The Americans, however, were equal to the occasion. Straight into the bay steamed the squadron under cover of the darkness and opened fire upon the Spanish squadron. The Spaniards replied vigorously both from the forts and the squadron but without avail, especially as their aim was poorly directed, although they fought courageously. The two hours' combat ended in the entire annihilation of the Spanish fleet, the burning of two Spanish cruisers, the sinking of another and serious damage to the remainder. Owing to the interruption of communication with Manila, details as to the loss the Americans have sustained have not been received, but it was probably comparatively light.

All communication has ceased between Manila and the main land, the cable having been cut, so that no authoritative information has been received, but the last reports indicated that a demand had been made by Commodore Dewey for the surrender of Manila, which had been refused and bombardment had begun. There have been rumors that the city has capitulated but they have not been verified. The city of Manila is in reality between two fires, as the natives of the island are in insurrection, and the American squadron lies before the city. No news has been received by the United States direct from Commodore Dewey, all information having come by way of Madrid or London.

The moral effect of the victory in the Philippines is likely to be great. It will doubtless tend to greatly shorten the war, and will leave our naval force in position to give their whole attention to operations in the Atlantic. The intention is to follow up this victory with an aggressive move upon Cuba, the taking of a port on that island and the landing of troops which shall advance upon Havana, while the squadron attacks it from the water, and troops are massed at Tampa, Fla., in readiness to carry out this movement. This plan may be changed, however, or delayed at least until information is received as to the whereabouts of the Spanish fleet which left the Cape Verde Islands under sealed orders. Swift cruisers are to be sent out to locate them. It is rumored that the Spanish will make one supreme effort to retrieve themselves, and their movements are being closely watched, the latest rumor being that the intention is to attack the northern Atlantic coast. Cruisers are being sent north to protect this section, and the flying squadron is being held in readiness to be sent north or south as needed. Meanwhile, internal troubles give the Spanish government almost as much anxiety as external ones, for the dissensions caused by the Carlists and Weylerists are so serious that they may lead to the final overthrow of the Bourbons, the reigning dynasty. Madrid is at present under martial law.

A tunnel under the Strait of Gibraltar is proposed by M. Berlier, who lately drove the tunnel under the Seine for the sewage disposal of Paris. Aside from its assumed commercial use, Mr. Berlier tells the French people that it would be extremely valuable in connecting France with Algeria in case of any trouble with England, which now controls the surface of the strait with its fortifications and powerful navy.

The extent to which ball bearings are now employed is shown by the importation of at least 200,000,000 balls a year. Last season most of these were imported from Schweinfurt, Germany, where the largest manufacture of steel balls in the world is located. Recently, however, a company has been formed in Allentown, Pa., which includes many of the stockholders of the German company, and capital has been subscribed for the erection of large works at that place for the manufacture of steel balls. The plant is to have a capacity equal at least to the importation demand of last year, namely 200,000,000.

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Washington News.

The Division of Statistics of the Department of Agriculture is just issuing some interesting figures showing a steady reduction in the freight rates of the various transportation companies of the country, since the war. In every instance, there has been a marked decrease in the rates charged for various articles of merchandise. In most cases, the rates have been reduced over half while in some cases the present rates are less than one-fourth what they were twenty years ago. This reduction applies not only to rates on farm products which the farmer must transport to his market, but as well on the articles which he must buy and which, therefore, can be delivered to him cheaper than ever before. The tendency is, as shown by the report, to constantly cheapen freight rates and thus bring the farmer in closer touch with those with whom he deals.

MARKETS IN THE FAR EAST.

A State Department report just received indicates great activity in the markets of the Orient. Our consul-general at Bangkok writes: "There are some American manufacturers and exporters who are bending their energies to developing our trade with China and Japan and they are meeting with extraordinary success, which goes to prove my claim that the market is here and only awaits a proper campaign for its conquest. There is great opportunity for developing the trade for agricultural products in this trans-Pacific market with its population of 300,000,000 and its foreign trade during 1897 of \$900,000,000."

VENEZUELA.

Another evidence of the growing reciprocity trade with the Republics of South America comes in an official report from the American minister at Caracas, stating that a United States warehouse has been opened there and that it is to contain a permanent exposition of American products and manufactures. The exhibit is under the management of American merchants and exporters, whose idea is to display the products of American agriculture and labor with a view to the widening of our markets in Venezuela. Our minister writes that never before has the time been so favorable for an extension of American trade in that country.

THE CROPS OF 1897.

The Department of Agriculture has just issued its final report on the acreage, production and value of the principal crops of 1897. It reports the total production of corn at 1,900,000,000 bushels, value at \$501,000,000; the total production of wheat 530,000,000 bushels, value at \$428,000,000; production of oats 700,000,000 bushels valued at \$148,000,000; production of barley, 66,000,000 bushels, value at \$25,000,000; the production of rye 27,000,000 bushels, valued at \$12,000,000; the production of potatoes 165,000,000 bushels, valued at \$90,000,000; the production of hay 60,000,000 tons valued at \$401,000,000.

PRACTICAL FORESTRY.

The state of New York seems alive to the general forest depletion now going on throughout the country, and last year spent \$1,000,000 for the purchase of forest lands, in addition to the 700,000 acres she previously owned, and this year voted another half million for the same purpose. She has just established a forest experiment in the Adirondacks with an area of 30,000 acres under the direction of Cornell University. A demonstration of practical forestry methods is to be made and a forestry probably established.

An interesting document is just about to be published by the Agricultural Department treating of the forest conditions of Wisconsin, a great lumber state. The publication is the result of a careful investigation and study of the state, by Mr. Fillbert Roth, a forest expert, and is accompanied by an outline by B. E. Fernow, chief of the Forestry Division, of a plan which, if adopted, would later result in an ideal and profitable condition in that state. The facts set forth in the report that 7,000,000 acres of Northern Wisconsin are poor farm land, i. e., forest soil proper, means, says Mr. Fernow, that the state should, as far as possible, prevent the occupation of this area by farmers, since such occupation can only lead to pauperization of farmers and lands.

Wisconsin, with a population of about 2,000,000, the report states, and a taxable property of about \$500,000,000, has a home consumption of over 600,000,000 feet, board measure, of lumber, beside enormous quantities of other wood material, which, if imported, would cost the state over \$25,000,000. Of its northern half—a land surface of over 18,000,000 acres—only seven per cent, is cultivated, the rest forming one continuous body of forest and waste land. From this area there have been cut during the last ten years over 30,000,000 feet of pine lumber alone. The lumbering industries in 1890 represented one-sixth of the total taxable property of the state, paying to over \$5,000,000 more than \$15,000,000 in wages, and the value of their products, amounting to \$35,000,000 was equal to more than a third of the entire output of agriculture

of the state. To this amount, \$35,000,000 must be added per annum, the proceeds of the forest products developed in the state. Of an original stand of 130,000,000,000 feet of pine, only about 17,000,000,000 are left. In almost every town of this region, logging has been carried on and over 8,000,000 of the seventeen million acres of forest are "cut-over" lands, largely burned, and waste-wood lands. This is the class of land which it is suggested that the state should possess for forestry purposes.

Foreign countries recognize the fact that the state should possess itself of all truly forest soils, such as are, on account of their character or location, unfit for agriculture, and which should be maintained in forest to prevent erosion of slopes, blowing of sand dunes, danger to water courses, etc. In France the government has increased its holdings in the last twenty years by three hundred and forty thousand acres and has in addition spent forty million dollars toward reforesting waste lands. In Prussia, between 1867 and 1895, over five million dollars were spent in increasing the forest area of the government and each year's budget contains a considerable item for such purpose, those of 1895 and 1896 carrying five hundred thousand dollars each for such use. The Department of Agriculture now estimates the value of the annual forest product to be fully one billion dollars, a sum practically equalling the value of the 1897 combined wheat, corn, oat and rye product, and as great as the value of our total enormous exports.

GUY E. MITCHELL.

Beacon Hill Notes.

The committee on taxation, after spending many days listening to testimony from many sources in regard to proposed taxation legislation and stirring up some discussion, has reported at last adversely on all proposed changes in the tax laws. The majority report of the committee is as follows:

"In announcing its conclusions the committee is aware that much disappointment is likely to be felt, both by those who think that our present system should be changed, and by those who think that, while it is correct in principle, it should be more stringently administered. Its conclusions are reached not because the committee feels that there is no room for improvement in the present system, or that no cause for complaint exists, for such is not the fact.

"To formulate a tax system for a new community is one thing, to revolutionize an existing system, quite another. It should be remembered, too, that legislation in this direction should only come in response to a pressing and widespread demand for it.

"Admitting all the defects in the present system which are charged against it, the prudent legislator must be confident that the changes proposed will make conditions distinctly better before he can recommend them; and change in long-established customs must come to meet the wishes of the average opinion—they cannot be hastened to conform to the views of reformers, who always ride to the crest of the wave of progress, nor can they be too long retarded, to avoid offending those who would never change existing conditions.

"In a word, the legislation on this subject cannot be much in advance of public opinion; and, as a committee, we are not satisfied that this mandate has yet been expressed in favor of radical changes."

In the House of Representatives, the bill to improve Green Harbor, in the town of Marshfield, was passed to be engrossed after the amendment which provides that not more than \$30,000 of the appropriation of \$67,000 shall be expended in 1898.

It appears that the action of the Massachusetts legislature in refusing to grant an appropriation to the cattle commission was due in part, to the opposition in a few localities of any kind of a tuberculosis campaign, but the heavy appropriations for war expenses probably had more to do with the vote than any other influence. The law makers felt like compensating for the lavish expenditure by a corresponding streak of economy. Had the vote on the appropriation come early in the session the commission would probably have secured its \$65,000.

World Over.

—Norway's Storting has adopted universal male suffrage.

—The Provincetown schooner Allice has been burned at Monrovia, Africa.

—The regular army wants to enlist three thousand Georgian and Tennessee negroes.

—Owing to bread riots in Italy, the cabinet reduces freight rates on food articles fifty per cent.

—English brook trout grown in the New Zealand rivers is now exported back to England in cold storage.

—Laboring men have 312 working days a year in Hungary, 308 in the United States, 278 in England and 267 in Russia.

—A pedestrian succeeded the other day in setting foot, in the course of five hours and forty minutes, in seven German states.

—There have been 71,000 deaths from plague in India so far, according to a recent report by the secretary for India in Parliament.

—Many Greeks are presenting themselves at the United States consulate at Athens, seeking enlistment in the United States forces for the war against Spain.

—Standard Hill Farm, near Northampton, on which the battle of the standard between King Stephen and the Empress Maud was fought in 1138, is offered for sale.

Increase the Product of Your Cows BY USING THE IMPROVED U. S. CREAM SEPARATOR It is Unequalled for Getting the Cream.

Beats all Others.
LYNDONVILLE, VT., Nov. 25, 1897.
As a skimmer, the Improved U. S. beats anything I ever tested.
W. I. POWERS, Mgr. Speedwell Farms.



Merest Trace of Butter-Fat.
ALBANY, N. Y., Aug. 14, 1897.
The Improved U. S. is a dandy. Its work is very near perfection, leaving but the merest trace of butter-fat in the skim-milk.

OTIS MEADER,
Dairy Editor, Turf, Farm and Home.

Product Increased and Quality Improved.

MAPLE GROVE FARM,
CUMBERLAND CENTRE, ME., Jan. 25, 1898.
Since we have been using the Improved U. S. Separator, we are confident we have largely increased the product of our cows, besides making a better quality of butter.

FRED. P. BLANCHARD.

50 Per Cent. More with the U. S.

EAST SHOREHAM, VT., March 19, 1898.
The Improved U. S. Separator skims to a trace, and puts the product of our dairy in such shape that we have realized 50 per cent. more from our cows this winter than ever before.

GEORGE THOMAS.

3 Quarts Cream from 10 Gallons Skimmed Milk.

We took 10 gallons of milk that had stood in pans 8 hours and had been skimmed, heated it to the proper temperature, and took 3 quarts of cream out of it with the Improved U. S. Separator after getting all we could by raising the cream in pans.

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THE CUT HERE SHOWN is that of our Osborne Columbia Harvester and Binder. It is full of features calculated to make it the best machinery of its kind for the farmer's use. The two most important features, because they directly affect the yield and cost of operating the machine as well as making it long lived, are the perfected self-aligning base and our patented roller bearings. The horses draw it with ease; channel steel bar main frame; a 24-in. main wheel with 3-in. tire gives easy motion and perfect traction and power; cannot raise and lower the driver's seat; front frame and bottom all steel—strongest and lightest straight drive piston—easy cutting perfect adjustment reel low open and elevators—great capacity; no side draft or neck weight. Buy your unit you see our local agent. Handy book for farm and house free.

See our Ad. next week. **D. M. OSBORNE & CO., Auburn, N. Y.**

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Permanent Tooth Weeders at \$4.50 and Removable Tooth at \$5.50 Each. Cash to accompany any order. Don't put off buying when you can get a machine at these prices, but Write to-day for circulars and agent's terms.

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Write for catalogue and prices of this and other tools for the farm.

A long lived, light draft, easy running plow.

BELOCHER & TAYLOR A. T. CO., Box 117, Chicago Falls, Mass.

—The Rio and Santos coffee crop is estimated at 10,500,000 bags.

—Protestant missions in China have of late been making rapid advances, owing to the fact that Government officials, from the emperor down, stand by and support the missionaries.

—A gentleman who recently died in London at the age of seventy had been a smoker since he was seventeen. During that time he kept a diary, in which he recorded that he had smoked 328,713 cigars, 43,539 of which were gifts. Those he paid for cost him 30,850.

—Spain intimates that privatizing will be resorted to only when the Spanish fleet has suffered defeat.

—Secretary Bowker of the Worcester Agricultural Society has been instructed to rent the grounds of the society again this year as has been done in former seasons. This is sure proof that the project of selling the grounds has been given up until a more favorable season, the negotiations previously noted in these columns having fallen through owing to the uncertainty of the business situation.

THE HOUSEHOLD.

SPRING-SONG.

BY MISS LUCY WHELOCK.

Old Mother Earth woke up from sleep,
And found she was cold and bare;
The winter was over, the spring was near,
And she had not a dress to wear.
"Alas!" she sighed with great dismay,
"Oh, where shall I get my clothes,
There's not a place to buy a suit,
And a dressmaker no one knows."
"I'll make you a dress," said the springing grass,
Just looking above the ground;
"A dress of green of the loveliest sheen,
To cover you all around."
"And we," said the dandelions,
"Will dot it with yellow bright;"
"I'll make it a fringe," said forget-me-not,
"Of blue, very soft and light."
"We'll embroider the front," said the violets,
"With a lovely purple tinge;"
"And we," said the roses, "will make you a crown
Of red, jeweled over with dew."
"And we'll be your gams," said a voice from the shade,
"Where the ladies' ear-drops live—
Orange is a color for you quite,
And the best that we have to give."

Old Mother Earth was thankful and glad,
And she put on her dress so gay;
And that is the reason, my little ones,
She is looking so lovely today.

HOW THE CHILDREN ENTER-TAINED THE BISHOP.

The children were all standing around the minister's chair, and he was trying with their assistance to read the Bishop's letter. It didn't matter that some of them couldn't read even a-t. They were all, down to Dummy Dee, the baby, trying to help the minister find out whether the Bishop was coming to see them Tuesday or Thursday. This was Tuesday.

There were six children, and the minister was their father. They had just moved to a new diocese, and had never seen the Bishop, so he had written that he would call, on his way through the town, and spend a day or two with them, and he was to come either Tuesday or Thursday.

The mother of this family was in the next room washing dishes. By and by she, too, came and looked over her husband's shoulder.

"Why, it's Thursday, just as plain as any writing I ever saw," she exclaimed at once. "So we can go out this afternoon and call on old Mrs. Smithers just as we intended to, in Mr. Jones' buggy."

"I don't know, I hope you are right, I never saw worse writing," said the minister, frowning, and trying another pair of spectacles.

But they finally decided it was Thursday, so directly after luncheon they started, and after solemnly promising they would not get into mischief, and would play in the front yard all the time, under the eye of a friendly neighbor who promised to watch them from her front window—where she placidly slumbered all the afternoon—the six children were left in a disconsolate row on the fence, loudly wishing that Mr. Jones' buggy was large enough to take them all out to see old Mrs. Smithers.

After the three o'clock train came in, a tall man carrying a valise came walking briskly up the street until he reached the minister's gate, where he stopped and looked in.

Teddy, Dick, and Harlow were playing soldiers, and they were all officers but Harlow, who beat the drum, which was nicer. Polly, Molly and Dummy Dee were reviewing the troops from the front porch. Polly was Queen Victoria, with a kitchen-apron train, and the brass saucerpan for a crown, on her head; from this depended several shingle curls, which hung gracefully around her royal face; but a stately carriage was rendered quite imperative, the saucerpan crown being many sizes too large, and prone to fall off if jiggled.

Molly loyally elected to be Mrs. Cleveland, and her costume was a buff holland window shade—what came off the roller just in time—pinned to the bottom of her dress, and on her head was jauntily poised her mother's red sweeping cap.

Dummy Dee represented the whole infantile Cleveland family, "for he's smart enough to be a dozen presidents," they all agreed, and Dummy Dee sucked his thumb and did not care.

"Does the Rev. Frank Thurston live here?" said a voice from the gate.

Polly, holding on her saucerpan crown, turned carefully in that direction. "Not now," she answered with much dignity. "He does when he's home, but he's gone to the country with mother."

"Ah, then he did not get my letter?"

"Oh, it's the Bishop!" they cried with one voice. At once the troops broke ranks, and with the queen Mrs. Cleveland they swept forward to greet him, leaving Dummy Dee alone in the rear. "Come in," they said. "We didn't expect you so soon—"

"But there's water upstairs in the spare room," said Ted, "cause I took it up."

"And mother aired the bed, and put on the best whole sheets, that weren't darned, this very morning, beginning to get ready for you," put in Molly.

"I am going to loan my pillow to you, while you are here, 'cause there aren't enough to go 'round when we have company, and I sleep on the sofa pillow," said Molly, her red sweeping cap bobbing up and down earnestly.

supper is the other, and mother is going to bake a frosted cake big enough for us, too. We always like to have the Bishop come," he added, feelingly.

"Have you any children of your own?" asked Polly.

The Bishop shook his head. "Not of my very own," he confessed, "but I am great friends with some children, who sometimes like me to tell them stories."

With one consent they drew nearer, and Dummy Dee climbed into his lap.

"Do it now, please," urged Ted.

"What about?" asked the Bishop.

At this, Dummy Dee took his thumb out of his mouth with a pop, like a cork out of a bottle. "Madder, Gooth," he said in a solemn voice, and immediately put it in again.

"There was an old woman lived under the sun, Who went out shooting without any gun; She shot a wild goose instead of a duck, And said, 'Oh! my eye, what very good luck.'"

responded the Bishop promptly. And Dummy Dee, perfectly satisfied, curled up against his shoulder and went sound asleep.

"About a dog, please," said Harlow next.

"Do you know what will make a pug dog tail an acre?" asked the Bishop.

"Does damp weather do it, like it does mother's front hair?" asked Dick.

"No," said the Bishop, laughing.

"But I was visiting, not long ago, where the lady had a very fat pug dog with a tightly curled tail. She asked me if I would like to see it uncurl. I said I certainly should, so she told me that the pug was not always a good dog, that he sometimes ran off and got into bad company, and thus caused much trouble. All the time she was talking this, the curl was disappearing from his tail, and at last it lay quite flat on the floor. 'But,' said the lady then, 'he quite often, almost always, in fact, is a dear little fellow, and very intelligent. He is a good watch dog, and obeys me beautifully,' and when she had finished, his tail was all bunched up again."

"We had a dog once," said Ted, "who barked at people when he thought father wasn't around. One night the vestrymen came out and Mac didn't see father, so he barked at the biggest vestrymen. They were all in a row on the walk—it was slick from a sleet storm—so father ran around in front of the frontmost man to try to get at Mac, but his feet slipped and he fell against the frontmost man, and he against the next, till they all fell down like tenpins."

"There come father and mother," called out Molly, who was nearest to the window, and instantly the Bishop found himself deserted by all but Dummy Dee, still sound asleep on his shoulder. Through the open window came the sound of many voices.

"I choose to tell," "No, let's all tell." Then a composite shriek smote the air: "He's here! the Bishop's here!" Presently bits like this drifted in:

"He's real nice, if he can't write."

"But how he can laugh! When we told him about his writing, and old Mrs. Smithers, and the chicken for his supper, he laughed the greatest lot."

"And mother's hair not curling when it rains."

"He makes ye-yontful poetry; it put Dummy Dee to sleep, just like father's sermons. He's holding Dummy Dee now."

"Oh, hurry, mother, and make the frosted cake. He's expecting it—I told him—and don't forget to make it big."

"Are you sick, or scared at anything, mother? Did Mr. Jones' horse and buggy cut up? You look kind of pale. We've been awful good children; you ask the Bishop!"—Living Church.

WHAT THE LAMBS SAY.

Said the little shepherdess,
"Many wise folk cannot guess
What the lambs say when they cry,
Or what the old sheep do reply."
"Can you tell?" I asked. "Oh, yes!"
Said the little shepherdess:
"All the young lambs say Ma-a! ma-a!"
"If a stranger comes this way,
Or the young ones, in their play,
From their tender mothers stray,
And go searching all around
Every stone and bushy mound,
Then the young lambs cry Ma-a! ma-a!
But their mothers answer, Ba-a!
Just to shame them when they cry.
Silly lambs to be so shy!"—Wide Awake.

A word about nervous children. Never scold them nor "make fun" of them says the N. Y. Ledger. They suffer enough without your threats or sarcasm. Pretend not to see their awkwardness when in company, nor their grimaces when alone. A case was reported the other day of a boy of ten years who, on being vexed, and often without any apparent provocation, will clench his hands and make the most frightful contortions of the muscles of his face and head till his poor mother fears he is idiotic. By no means. He is the brightest boy in his class at school, fond of reading and of natural history, but he is of a highly nervous temperament, and has not been taught to control the little wires, so to speak, on which he is strung. This is no single case. There are thousands of children who give way to their nerves in similar fashion. Talk to them about these curious little fellows that should be their servants, not their masters. Never whip them. The man or woman who whips a nervous child is on a level with brutes that have no reason. Encourage them. Help them. Be patient with them. They are the making of our future successful men and women, for they will work hard at whatever they undertake. Brace up your own nerves first, and then be indulgent toward the capers of your over-nervous children.

A SPRING PRESCRIPTION.

My pallid friend, is your pulse beating low?
Does the red wine of life too sluggishly flow?
Set it splashing through every tingling vein
By outdoor work, till you feel once again
Like giving a cheery schoolboy shout;
Get out!

Are you morbid, and like the owl in the tree,
Do you gloomily hoot at what you can't see?
Perhaps now, instead of being so wise,
You are looking through jaundiced eyes;
Perhaps you are bilious, or getting too stout;
Get out!

Out in an air where fresh breezes blow
Away all the cobwebs that sometimes grow
To all gloomy thoughts instead of the bright,
Content with such foes and put them to rout;
Get out!

—Unidentified.

THE HOME CORNER.

FREE PATTERN.

By special arrangements with the BAZAR GLOVE-FITTING PATTERNS CO., we are able to supply our readers with the Bazar Glove-Fitting Patterns at a very low cost. It is acknowledged by every one that these patterns are the simplest, most economical and most reliable patterns published. Full directions accompany each pattern, and our lady readers have been invariably pleased with them in the past. The coupon below must accompany each order, otherwise the pattern will not be sent.

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Name
Address
No. of Pattern
Size
Enclose ten cents to pay expenses.



No. 7139—Ladies' Mother Hubbard Wrapper.

A neat and useful gown is here shown composed of polka-dot percale, trimmed with bands of insertion. The upper portion consists of a short yoke that is simply adjusted by shoulder seams and has a straight lower edge. The full portion has side seams and is gathered at the upper edge and joined to the yoke, a single band of insertion concealing the seam. The sleeves are one-seamed and sufficiently loose to permit of perfect freedom of the arms, a feature necessary in gowns of this description. Gathers adjust the fulness of the sleeves at the upper and lower edges, and a single band of insertion completes the wrists. The neck finishes with a neat rolling collar. Percale, dimity, gingham, lawn, batiste and all washable fabrics are adapted to the mode, or the garment can be made of either French or outing flannel, in which instance it can be used as a nightdress when travelling. Ladies contemplating a sea voyage will find gowns of this description exceedingly comfortable and practicable. To make this wrapper for a lady in the medium size will require eight yards of thirty-six-inch material. The pattern, No. 7139, is cut in sizes for a 32, 34, 36, 38, 40 and 42-inch bust measure. With coupon, 10 cents.



7363—Ladies' Waist with Tucked Front.

The shirt waist is again prominent among the summer styles, and tucking is one of the marked features of the season. With a well cut and fitted percale or lawn shirt waist, fresh from the laundry, there comes an appearance of style and neatness that accounts for its long continued popularity. Fancy dotted percale in lavender and white made this stylish waist, the tucks of uniform depth (allowed for in the pattern) giving a desirable fulness across the bust that is very generally becoming. The waist is arranged over a fitted lining (which can be omitted if not desired,) and has a straight back yoke which meets the front in seams well forward on the shoulders. An applied box

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plait finishes the right front, through which the closing is effected with studs or buttons and buttonholes. Gathers at the waist line pouch the front in latest style, the back being drawn smoothly to the waist. The neck is finished with a collar band, and the standing collar of white linen is made adjustable. The correct sleeves are of fashionable size, the moderate fulness being gathered at the top and wrists into straight cuffs. A leather belt is worn at the waist, and a bow tie of satin at the neck. To make this waist for a lady of medium size four yards of material 36 inches wide will be required. The pattern, 7363, is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure. With coupon, 10 cents.

Colored straw hats were never prettier—the softest hues of biscuit, leaf green, fawn, forget-me-not blue, two charming pinks, gray and violet are displayed by the milliner, says the Philadelphia Record. Where the hat is so pretty it is easy to trim it. A little ribbon, flowers or tulle can be put in shape. This season is the great opportunity of the home milliner.

Frills of straw with pointed edge come in all the colors one could wish. They are usually in two tones of the same color, but not always. Pointed straw frilling is a durable article. It is used often in a double-rowed touque or to give height or width to a bonnet. Straw ribbon is another handsome article commended to milliners' regard. In time silk or satin ribbon will fall, and as all colored ribbons, silk or straw, lose color in time with exposure to brilliant sunshine, the straw ribbon seems to have the advantage in every respect. If dusty, you can whisk it off with an ordinary bonnet brush of horsehair. A splint whisk might tear the straw.

Spring hats are stately affairs, with the novel feature of a built-up back. The short-back sailor is all very well, but a good model has the brim long enough to turn up in the rear, and so makes the effect of a high crown. A few stitches with a long milliner's needle and linen thread hold the brim supported in position. Now collect all the tulle or net you can spare, clouds of pale green, soft gray or light blue; leave room for a garden of roses or whatever flower you prefer. The Sweet William seems a favorite among artificial flowers. It is often used in wreaths. A great deal of green stem and leaf is displayed. The lovely hat has clusters of greenest velvet leaves used altogether as cascades. Where the hat is of high color, vine leaves and thorny stems look as well as flowers would in the way of decoration.

You can purchase ready-made the puckering, frillings or shirrings of white or black net or tulle you require to face your hat brim. The shirrings are heavily corded, the puckering accurately spaced and the pleatings all that could be desired. It simplifies the task to have the facing provided, as much of the becomingness of a new bonnet or hat depends upon the soft puffings and frillings which are introduced immediately next to the face.

The choux or "cabbage bow" is one of the latest style bows for hat adornment. It can be made of any medium stiff material, satin or taffeta ribbon, or taffeta in the piece. Velvet would do but it is a little heavy, besides it must be a two-sided stuff as both sides show. A heavy wire is tailed into the outer edge. Another wire is run through a tuck about half an inch further in. This latter is handsome but not necessary. These bows are usually placed a little to the left of the front, two being the usual number with some standing decoration coming out from between. Other than that, the two are of different shapes.

Scarf trimming or the swathed effects still obtain for around the crowns of the hats. They are mostly of silk or ribbon veiled with net or chiffon. Some of the imported materials, however, have these scarfs of crepe, maline, mousseline, or chiffon continued from the back into long, soft strings. They are then brought about the neck and loosely knotted on a breast or at the side of the throat. The effect is quite soft and becoming.

One of the newest styles of brim trimming is in the swathed effect mentioned above in silk of three tones of one color so nicely graduated as to give almost an ombre effect. The darkest shade is usually put outside, leaving the shading to grow lighter toward the crown.

Burnt orange vies with all shades of purple for supremacy as fashion's favorite color. Both shades are seen on every side, particularly in floral beauties. Purple fuchsias, lilacs and violets seem to be the favored flowers until the next moment one sees roses of bright orange and nasturtiums in such profusion as to contradict that belief.

Bloomers, knickerbockers and divided skirts are not fashionable says Harper's Bazar. The divided skirts are often used than either of the two before mentioned; but even enthusiastic bicyclists find it possible to ride a wheel and wear a skirt that is becoming both on the wheel and off it, and that a divided skirt rarely is. In the beginning of bicycling, tailors did not understand how to make the skirt; they were too wide or too narrow, and the fulness was in the wrong place; but now a degree of perfection has been reached, so that, like riding-habits, they are as trim and neat as possible, with not one

inch too much of material, and yet enough to be entirely becoming.

Serge, chevrot and covert-cloth are all excellent materials, and there are many golf cloths with double face that make very smart skirts; these last are largely used by one of the leading makers in New York. Skirts made of double-faced materials are finished so they can be worn either side out, thus virtually giving two skirts—a dark blue or black will have the other side of black and white of a medium size check, etc. It is not well to go in for any startling effects in a bicycle suit; the quieter a woman dresses, the better she looks. The prize awarded at the recent doll show for the best bicycle costume was given to a plaid skirt and plain jacket, but the same effect in all plain material would have been better. There is considerable dispute as to the best style of jacket to wear. Some people like the long coat of three-quarter length, while others prefer the Eton jacket. The great advantage of the Eton jacket is that it is small enough to take off and roll into a little parcel, which can be strapped on the handle-bar; but it should not be on the double-breasted plan, with any large revers. The smartest ones are more on the mess-jacket order, fastened at the throat only, then open and the fronts left loose.

Bicycling boots, either tan or black, are worn until very hot weather sets in when the low shoes and plaid stockings will again be fashionable. It looks particularly well to wear leggings of the same color as the costume, if the costume, is one of the light tan chevrots or flannels; but in hot weather leggings, like the boots, are very hot indeed. The plaid stockings do not look well if one has large feet and thick ankles, and of course tan shoes with stockings to match, or black shoes with the black stockings, are always in good taste.

Concerning the bread to give to a child, Mrs. Rorer says in the Ladies' Home Journal that the proper kinds include all forms of twice-baked bread: Zwieback, the ordinary rusk, the pulled bread, the toasted water crackers and the ordinary dry toast—the object being to render them more digestible by allowing the heat in the second baking to convert a portion of the starch into sugar. A plain rusk may be made by adding just a little sugar to the bread dough; instead of making it into loaves make it into small biscuits, and whiff it is very light bake carefully for thirty minutes. Take from the oven, and when cool put them carefully into halves. Line a baking-pan with brown paper, put in the halves, crust side down; put into a very moderate oven, that the moisture may be driven out; then close the door and brown the rusk slowly to the very center, being careful not to burn. These may be put into clean cheesecloth bags and hung up in a dry, cool closet. They may be served plain or may be covered with hot milk, or may be covered with hot water, and a little cream added at serving time.

Much bread forms one of the best breakfast foods for growing children. Stir carefully into one pint of hot milk in a double boiler two-thirds of a cup of cornmeal. Cook and stir five minutes. Take from the fire, and when cool—cold—add the yolks of four eggs. Then carefully fold in the well-beaten whites. Turn this into a baking-dish and bake thirty minutes in a quick oven.

Not until children have reached five or six years should they be expected to conform to the three meals a day that usually suffice for their seniors. Even then it is wise to provide some slight refreshment to be taken regularly between meals, says Harper's Bazar.

I wish to emphasize the necessity that such refreshment should be regular. It should also be given by authority; that is to say, the mother should say when the child is to be fed, and with what, instead of allowing him the range of the pantry or the freedom of the cooky-jar. The lunch between meals should be simple and wholesome—a slice of bread-and-butter and an apple, or whole-wheat or Graham or oatmeal crackers and a glass of milk. Nothing is more injurious to a child's digestion than the habit of promiscuous nibbling between meals.

The craving that leads a child to ask for food in the middle of the morning or of the afternoon is entirely natural, but he should not be permitted to satisfy it by a trip to the nearest candy-shop, or even by the bestowal of a piece of cake or a handful of sweet biscuits.

This is the season of marbles, and the small boys' trunks and stockings suffer in consequence, says an exchange.

"Please tell me," once asked a desperate mother, "how I can keep my boy from wearing out the knees of his trousers?"

"You might kill the boy," was the answer, "but the laws of the land forbid that. The only sure way we know of is to let him wear kilts."

Knee protectors are sold in all the stores, and may be easily made at home. They are simply diamond-shaped pieces of black cloth, made double and bound with braid on the edges, which cover the knees and are kept in place by elastic straps passing under the knee.

One ingenious mother makes knee protectors for her small boy from the tops of the stockings, hemming them at the bottom and running narrow elastic tape in the casing thus formed. This holds the knee protector in position below the knee. Above it the garter retains and keeps it smooth.

Many of the trousers sold for boys now come with pieces for mending. When this becomes necessary neither patch nor darn the knee. Instead rip both seams, cut the worn part off evenly, and set the patch in carefully, taking care that the figures, whether stripe, thread or check, match exactly. Then press the seam, and if your work is well done, it will require a sharp eye to detect it.

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[EXTRACTS FROM MRS. PINKHAM'S NOTE BOOK.]

Woman's greatest gift is the power to inspire admiration, respect and love. There is a beauty in health which is more attractive to men than mere regularity of feature.

To be a successful wife, to retain the love and admiration of her husband, to be a woman's constant study. At the first indication of ill health, of painful menses, of pain in the side, headache or backache, secure Lydia E. Pinkham's Vegetable Compound, and begin its use. This truly wonderful remedy is the safeguard of women's health.

Mrs. MABEL SMITH, 345 Central Ave., Jersey City Heights, N. J., writes:

"DEAR MRS. PINKHAM:—I can hardly find words with which to thank you for what your wonderful remedy has done for me. Without it I would by this time have been dead or worse, insane; for when I started to take Lydia E. Pinkham's Vegetable Compound I was in a terrible state. I think it would be impossible for me to tell all I suffered. Every part of my body seemed to pain some way. The pain in my back and head was terrible. I was nervous, had hysterics and fainting spells. My case was one that was given up by two of the best doctors in Brooklyn. I had given up myself; as I had tried so many things, I believed nothing would ever do me any good. But, thank you to your medicine, I am now well and strong; in fact, another person entirely."

If you are puzzled about yourself, write freely and fully to Mrs. Pinkham, at Lynn, Mass., and secure the advice which she offers free of charge to all women. This is the advice that has brought sunshine into many homes which nervousness and irritability had nearly wrecked.

Lydia E. Pinkham's Vegetable Compound; a Woman's Remedy for Woman's ills.

moist clothing makes the natural bleaching process more effective. Another disputed question is that of bluing, but those who look into chemical results are of the opinion that it is better to give up the use of bluing than to run the risk of the deposits that will surely come with the combination of soap alkali and the iron that it precipitates from the indigo.

Miss Elliott also said that the new linen is sometimes ruined by being wrung too hard. Borax is invaluable in the laundry and safer in the hands of an inexperienced person than soap. All stains should be taken out before washing, as soap makes them indelible. Many stains will yield to a thorough soaking in cold water, and boiling water poured upon the surface afterward. Javelle water should be in every house; Javelle is better for removing stains from linen. To make it, put one pound of sal soda and one-quarter of a pound of chloride of lime with two quarts of boiling water. Let it stand, and then pour off the clear part. The sediment will answer for coarse scrubbing, but it should never be put on a fabric. When iron-rust is to be treated, put some boiling water in an earthen dish, dip the linen in, then with a medicine dropper, put on a little muriatic acid, when it turns the spots a light yellow, drop the cloth into another earthen dish

of warm water, and lastly into a third holding a strong ammonia solution. Kerosene will take out vaseline stains; nothing else will. Salt is excellent for soiled handkerchiefs and towels, being a good disinfectant.

For sprinkling, Miss Elliott advised the use of a small watering pot and hot water. She also showed how fine lines and handkerchiefs will look if dried on glass, a mirror or a window, thus saving the ironing process. Blankets and woollens, she said, ought never to have an iron put near them.

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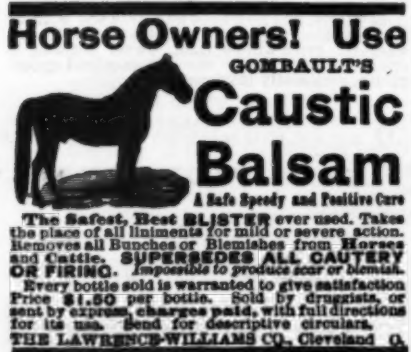
A reader of the Breeder's Gazette asks that paper what kind of a horse a farmer should raise? The following reply is made:

The most profitable horse for the average farmer to raise would be class No. 4, which would be the largest and highest quality of draft horse that he can possibly raise. Be sure to get size and quality by selecting the best quality of draft mares of good smooth finish and as large as possible and breed them to the highest class and best quality of draft horse that you can possibly find and then feed them so as to give them a continual growth from their mother's milk to the time they are ready for the market, which is between four and five years old. By this kind of breeding, with the proper care, you can produce a draft horse that will weigh 1,600 to 1,800 and possibly 2,000 pounds. This class of heavy draft horse has become very scarce and high and very rare specimens have sold as high as \$300 per head here lately. There would be plenty of money in raising them at the present prices. An exporter who is buying several carloads each week for the English market shipped recently forty head of draft horses weighing from 1,600 to 1,800 pounds for which he paid here \$205 per head, so you can see these horses are nearly as high as they need to be and will continue to get higher all the time. The medium grades have advanced but little.

Class No. 3 is a bus horse. If you have a small, compact, smooth mare that is not suitable for raising the coach or light-harness horse breed her to a Percheron and you will get a nice bus or express horse that will be about as profitable as the heavy draft. The demand is increasing for them every day. They weigh 1,300 to 1,400 pounds. There is no question but that there is to be a great shortage in the supply of horses for a few years to come. There have hardly been any colts raised since 1894, and we have not begun to feel the effect of these short crops of colts as we will in a few years more. We believe the best quality of heavy draft horses in one or two years will be as high as they ever were. There is a great export demand upon us, and it is increasing every day as business increases and it will not be long before this class of horses will be extremely high. The horse business has a grand future, and we believe there never was a time when it offered so great inducements for breeding and raising good horses as at the present time. The scarcity of good horses and the strong demand both foreign and domestic surely means high prices and a stronger demand than ever was known before.—Breeder's Gazette.

It has been stated upon good authority that, notwithstanding the improved demand for horses of high type, owing largely to a scarcity of such animals, there seems to be little effort upon the part of farmers to change their methods of breeding. A Nebraska friend writes that in his vicinity a station without breeding or other qualifications has already served over forty mares, while stallions of approved blood lines and possessed of individual merit have scarcely begun their stud season. The probable reason for this condition of affairs rests in the "working" powers of the "scrub" stallion's owner, and in the added fact that he stands at a very low service fee. Farmers are penny wise and pound foolish when they breed a cheap stallion. By the term cheap we intend conveying the idea of cheapness in more than one respect. A stallion may be "cheap" at \$100 per season, while another may be exceedingly "cheap" at \$5 to insure with foal. A cheap horse, as we understand it, is one that has neither breeding, size, individuality or other good quality to attract public patronage. A "very cheap" horse is that one whose foals sell for an advance over cost of production, no matter what the service fee. A "very dear" stallion is that one whose foals when matured have to be hawked about from "Dan to Beersheba" in search of buyers at "plum" prices, even if the service fee be donated.—Western Horseman.

LESS THAN HALF the price of straw is one reason why you should use German Peat Moss for horse bedding. C. B. Barrett, Importer, 45 North Market street, Boston.



Horse Owners! Use Caustic Balm

The Weather Bureau's Weekly Crop Bulletin.

FOR WEEK ENDING MONDAY MAY 2, 1898.

The past week has been rather unfavorable for farming operations in New England. A considerable rainfall, unseasonably low temperature, and lack of sunshine constituted a chain of conditions detrimental to the advancement of vegetation, and a hindrance to farm work of all kinds. The rainy days were generally the 26th, 28th and 29th. Of the remaining days two were cloudy and damp, thus leaving only two days out of the entire week that were suitable. The heaviest precipitation area in the several storms was the coast line of the district, which was visited by a typical "coast storm" on the 28th and 29th, involving heavy rain and high winds. In most interior sections there were hard frosts on two mornings, two cold storms with some hail and dashes of snow. The week ended with prevailing bright and fine weather and higher, seasonable temperature.

As a result of the week's weather, growth has been almost at a standstill. Many fields have been too wet to work, and will require several days of drying weather to get into condition. It is feared that considerable damage may have been done to seed planted prior to the past week.

Our correspondents in Maine report very little done up to date, nearly all land being too wet to work. In a number of sections of the State the ground was frozen on the morning of the 28th. The general impression seems to be that grass wintered well, and is in excellent condition, although retarded in growth by the bad weather. Stock is not yet at pasture, but will be soon.

About the same state of affairs prevails in New Hampshire, and planting has not been done to any amount. The outlook is favorable for a generous bloom of apples and pears, but peach buds are largely killed. Spring seedling is behind and the same is true of most farm operations.

Moderate progress has been made in Vermont. The farmers are plowing and sowing some grain. Fruit trees promise a large blossom, and the prospect for grass is good. A few sheep and small cattle have been turned to pasture. Some farmers have begun fitting their corn ground.

In Massachusetts plants under glass show the effect of the dull weather and no sunshine. The work of preparing land for crops goes on, but planting is not, as yet, general. Grass has abundant water and grows tolerably well, seeming to enjoy the present situation better than anything else. No apparent injury has been done to fruit buds, which are developing fairly well. Oats and potatoes are being planted to a limited extent. Cattle has been turned to pasture in a few instances. In extreme eastern sections early peas are up, and with proper weather will forge ahead. In the tobacco section the beds are in fair condition, but plants make very slow growth.

Recent heavy rains in Rhode Island did considerable damage to newly seeded ground and some planting will have to be done again. Low lands cannot be worked owing to their wetness. Some grain has started and oats as a rule look well. Barley is reported in sections as looking brown, attributable to the cold and wet weather.

Cherries and plum trees are in full bloom in southern Connecticut, peaches half bloomed, and pears just coming into bloom, while apples are almost ready to open. Nothing but grass has grown much, and that not so fast as under normal conditions. Much ground is ready for planting, and with a few days of drying weather agricultural operations will take a great start. Tobacco beds, as in Massachusetts, are not in the best condition, sunshine and warm weather is required. Some early cabbages have been set and onions sowed. Asparagus has not shown much energy thus far.

J. W. SMITH,
Section Director, Boston, Mass.

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P. M. SHARPLES, West Chester, Pa.

Sheep as Missionaries.

A paper was recently read before the twenty-seventh annual meeting of the Kansas Board of Agriculture, giving a number of reasons why the farmers of that state should keep sheep. The various forms of income and their value to the land were instanced, but a reason not usually urged was the influence of sheep culture upon character. "Sheep," said the writer, "are the gentlest, the most cleanly; they will not soil their feet if they can avoid it, much less track dirt into their houses. Their sweetness of disposition, modesty, pliable docility, patience, evenness of temper and contentment with whatever may be their lot must, just as surely as the dripping of the water wears the rock, have a potent influence over their master. This may be an entirely new attribute of the sheep; but I am fully persuaded that the man who tends his flocks, and follows them for many years, unless wholly depraved, becomes a gentler, kinder and better man." Perhaps, then, it is the smaller number of sheep than formerly, and the general shrinkage of the industry of sheep raising, that has made the conditions easier for the country to fall into a warlike spirit. But, on the other hand, Spain has always been a warlike country, an ungente, even a cruel country, and yet the Spanish merino flocks have been the most famous in the world, and were regarded by the natives with as much pride and affection as an Arab feels for his horse.

But as missionaries of peace and gentleness they have not yet been a success in that country.—Transcript.

Providence Line.

This popular line will resume passenger service for the season of 1898 on Monday, May 9. Express trains, with parlor cars attached, will leave Boston from Park Square Station at 6.45 P. M., running direct to the wharf of the steamers Plymouth and Rhode Island, leaving Providence at 8 P. M., due New York 7 A. M., connecting with rail and steamship lines to all points South and West. A delightful sail through Narragansett Bay, a fine orchestra on each steamer, unexcelled cuisine, careful and attentive service, with all possible facilities for the comfort, ease, and convenience of passengers, combine to make the Providence Line deservedly popular with travelers.

Unquestionably there is no livelier man in Minnesota more widely known than Mr. C. B. Dickens of Minneapolis, who conducts one of the largest livery stables in the Northwest. Regarding Glenn's Ointment, Mr. Dickens says, "I have been using it for some time with great success and recommend it to my many friends. No horseman should be without it in his stable." For curbs, splints, spavins, wind-puffs and all bunions give it a trial. If you cannot obtain from your druggist write W. B. Eddy & Co., Whitehall, N. Y., who will send regular size for \$1.50, smaller size 50 cents.

NEW MAIL

HIGHEST GRADE—LATEST IMPROVEMENTS.

MEN'S AND LADIES' PATTERNS.

Best Medium Priced Wheels in Market. HANOVER Men's \$45. Ladies' \$40. Boys and Girls' \$20, \$25, \$30. Closing out a few men's and ladies' 24 inch High Grade Wheels, at \$10, \$15, \$20, etc.

The place to buy Wheels.

Wm. READ & SONS,

107 Washington St., Boston.

Established 1826.

GOSHEN LOW WAGON WHEELS

Composed of layers upon layers of inch thick dried Indiana White Oak. See how the wheels are made. They are made in the best way. Look at the wheels that hold buyers together. Wheels that hold buyers together. Wheels that hold buyers together. Buy a set of two wheels—high one and low one. Fully guaranteed. Circumference and price list free.

Kelly F. Kelly & Co., 28 Furt St., GOSHEN, IND.

ST. LAMBERT.

A. J. C. G., JERSEYS.

Young ones For Sale. Send for Prices and Pedigrees.

ROBERT FARM, Dover, N. H., OR

J. W. ROBERT, 73 Tremont St., Boston

DAIRYING.

A Few Thoughts From a Plain Farmer.

There seems to be a widespread notion that "farmers' butter" can not equal in quality the product of the creamery.

Go to any country store and ask the price of butter and you will be told that "creamery" is worth so much while farmers' butter is at least two cents, and often five cents or more, lower. The cause of this discrepancy is largely due to a lack of uniformity, not only in the product of neighboring farms, but several samples of butter from the same place and made by the same person often show a marked difference in quality.

This uncertainty in the quality of his product reacts on the dairy farmer to his pecuniary hurt. For as we noted above, the selling price of his butter is often lowered permanently, even when it may nearly or quite equal the product of the nearest creamery.

Now dairying is, or should be, the most profitable line of employment a farmer can pursue. And if he make from twenty-five to two hundred or more pounds per week, as many dairy farmers do, a loss of even two cents per pound becomes quite an item, and especially so since no portion of it enters into the running expense, but is so much clear.

Instead of the dairymen producing butter inferior to "creamery," or at least that lacks the uniformity of the creamery product, it is within his power to excel the creamery in producing butter of uniformly superior grade.

The truth of this statement becomes the more readily apparent if we take into consideration two things.

First:—The milk received at a creamery comes from many sources and has been subjected to nearly as many different conditions. It is of varying degrees of freshness, or in some cases of staleness, for many smaller patrons deliver their milk but once in two days. It has also recently lost much of its animal heat, and milk is never creamed to better advantage than when first drawn.

Second:—The dairymen who is also his own butter-maker has within his control every condition influencing the quality of his product, and if he is keenly alive to his own interests he will allow no portion of this advantage to be lost to him. Care will be exercised that the milk shall not become tainted from rancid foods given at unsuitable times. The stables will be properly ventilated and cleaned, and the cows well brushed off and if need be their udders washed before the milk is drawn, and what is a matter of not the least importance in the production of uniform butter of first quality, provision will be made for creaming the milk while warm and sweet.

In this last named factor lies the one great advantage of "creamery" over farmer's butter. For by the use of the separator employed in butter factories for creaming the milk, not only is the cream secured in its best estate, but much of the fifth and foreign substances are removed. Some separators also thoroughly aerate the milk from which the odors and taints of rancid foods are thus driven off. These advantages have been enjoyed only by the creameries until within a few years, but there are now reliable hand power cream separators to be had which do quite as good work as the larger machines, and it is only necessary to observe ordinary care that an honestly built separator is selected.

My own experience is confined to the Sharp, Lee Farm separator made at West Chester, Pa., and it has proven a most satisfactory machine indeed. It is very simple, easily cared for and turns as readily as a grain fan. And the cream—well I never saw such cream from any other source; and I am perfectly content to let the pigs have what cream is left in the skim-milk, but some corn meal will be needed with it to fatten them. Among other advantages a separator offers is a great saving of time, which is a matter of special importance in the busy season.

One farmer we know of feeds his warm skimmed milk during the winter to his cows,

Springer Bros.

Ladies' Tailor-Made Suits, Coats, Capes, Skirts, Silk Waists, Bicycle Suits, Misses' and Children's Suits and Reefers.

No greater inducements in fashionable styles or reasonable prices are possible elsewhere.

An Elegant Display of SHIRT WAISTS Will be Opened the First Week in May.

No other establishment possesses greater facilities or can offer superior attractions and inducements to its patrons.

500 WASHINGTON ST.

and says he is satisfied it saves him about twenty per cent of other food. I mention this because ordinarily the warm skimmed milk is thought of only as a first class food for calves and pigs.

Another thing that keeps some farmers from realizing as much as they should for their butter is that they have become so accustomed to their own make that they do not appreciate the fact that the market may demand something different. The peculiarities of their method of handling the milk, cream and butter is stamped indelibly upon the product of their dairies, and they, themselves, from having eaten this product for years, have become so entirely used to this home bred flavor that it stands for highest quality with them, and they are honestly surprised that it is not equally appreciated by everyone else.

That, for profit, no other branch of farming can approach dairying is a well recognized fact. It is necessary, however, in order to attain generous success in this department, to apply to it business principles just as must be done in any mercantile pursuit, in other words to produce the best possible article at the least possible expense.

Springer Bros' Fashions.



The bicycle suit here illustrated is of brown mixed Scotch goods, made with a Norfolk jacket and the straps of the same. Small buttons close the jacket and the skirt at the side seams. The jacket is faced with silk, so as to present a handsome appearance, and the whole is exceedingly natty. This is only one of the handsome suits in stock at this popular store.

\$50.00 RANGES FOR \$25.00

TO INTRODUCE OUR TRIUMPH STEEL RANGE into every section of the United States, we will for a short time deliver at our deot free of charge our highest grade steel ranges for \$25.00. The regular retail price is \$50.00. It has a eight-inch lid. Top cooking surface is 30x36 inches. Oven 12 inches high, 17 inches wide and 21 1/2 inches deep, and 15 gallon reservoir. Weight 40 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Ranges made. W. H. G. WILLARD, Manufacturer, 113 & 115 N. Second St., St. Louis, Mo.

If you are not feeling well, why don't you take Hood's Sarsaparilla? It will purify and enrich your blood and do you wonderful good.

Veterinary Column.

J. F. H., Cambridge, Mass.—A sprain such as you describe is not incurable. Use Tuttle's Elixir.

Horseman, Elgin, Ill.—There is only one sure way of escaping a lameness. Apply Tuttle's Elixir, and it will remain moist on the part affected.

Mrs. F. S. T., Richmond, Va.—If you find a case of colic that Tuttle's Elixir will not cure, it will ease you to the goal reward offered by Dr. Tuttle.

Willis T. Davis, M.D., Alton, N. H., writes:

"To whom it may concern:—This certifies that my horse, on the twentieth day of January, 1898, ran away with a hitch post and injured his knees so badly that he was pronounced worthless by several horse doctors. I tried various remedies for six weeks and the grow worse. I at length used Tuttle's Elixir, and in three weeks from the time I commenced to use it I had her on the road ready for work. The knees healed so nicely that it is difficult to find the scars."

DR. S. A. TUTTLE, 37 Beverly Street, Boston, Mass.

DR. S. A. TUTTLE:—

Having used your Elixir for sore backs, colic, sprains and horse ail, I can recommend it to horse owners.

Supt. Woonsocket St. R. R. Co.

Subscribed this 25th day of September, 1897.

Aphid.—The Green Fly.

Carpcaspa P.—The Galling Mch.

Doryphora 10 L.—The Potato Bug.

Oniscus.—The Sow Bug.

Tylosioma T.—The Strawberry Crown Borer.

Pieris Glauca, L.—The Cabbage Worm.

Pieris Rapae, L.—The Cabbage Worm.

Agrotis C. C.—The Cabbage Worm.

Monosticta B. s.—The Rose Slug.

Palaeocrita V.—The Cankerworm.

Nematus, Vent.—The Curculionid Worm.

Gasterocercus Xan.—The Elm Tree Worm.

Diabrotica VII.—The Cucumber Beetle.

Eriopneuste C.—The Pear Tree Slug.

Anasa T.—The Squash Bug, and others by the

WITNESS to above signatures:

Conotrachelus, N.—The Curculionid.

One and all of us sufferers from HAMMOND'S SLUG SHOT, made at Fishkill-on-Hudson, N. Y.

PROVIDENCE LINE

FOR—

NEW YORK

AND ALL PORTS SOUTH AND WEST

Resumes Passenger Service

Monday, May 9th, 1898.

Steamers "PLYMOUTH" and

"RHODE ISLAND" in Commission.

FROM BOSTON:—Steamboat Express with Parlor Cars leaves Park Square Station 6.45 A. M. daily, except Sunday.

FROM WORCESTER:—Steamboat Express Train leaves Union Station 6.10 P. M. daily, except Sunday.

Returning leave New York at 5.30 P. M., from New York 7 A. M.

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